

REMARKS

In view of the preceding amendments and the comments which follow, and pursuant to 37 C.F.R. § 1.111, amendment and reconsideration of the Official Action of August 4, 2003 is respectfully requested by Applicant.

Summary

Claims 1 – 6, 8 and 9 stand rejected, and remain pending following consideration of the present remarks.

Rejection under 35 U.S.C. § 103

The Examiner has rejected claims 1 – 5, 8 and 9 under 35 U.S.C. 103(a) as being unpatentable over Pijanowski (U.S. 6,247,906) in view of Kimura (U.S. 6,462,451). These claim rejections are respectfully traversed. Independent claim 3 is directed to an inner rotor motor comprising a rotor and a stator. The stator includes a plurality of teeth that are outside a circumference of the rotor and face the rotor. Further, the stator is provided so that a central angle of the rotor with respect to the stator is in a range within 180 degrees. Claim 1 further recites that the magnetic teeth are set so that a first angle defined by extensions of the centerlines of two adjacent magnetic poles teeth is smaller than a second angle defined by lines each connecting a tip center of one of the adjacent magnetic pole teeth center of one of the adjacent magnetic pole teeth and a rotation center of the rotor. As embodied in Figure 4, claim 1 relates to the arrangement of the magnetic pole teeth 33 to 38 wherein the angle P2 defined by extensions of centerlines of two adjacent magnetic pole teeth, say 33 and 34 or 34 and 35, is smaller than the angle P1 defined by lines connecting centers of tip end portions of the two adjacent magnetic pole teeth, say 33 and 34 or 34 and 35, with the center 21 of the rotor.

The Examiner states that Kimura discloses a permanent magnet rotating electric machine having magnetic pole teeth that are set so that a first angle defined by extensions of the centerlines of two adjacent magnetic pole teeth is

smaller than a second angle (see Figure 2), which Pijanowski fails to disclose. However, upon further analysis of Kimura, Figures 2 and 8 disclose that the center X of the rotor 20 lies on the extensions of the centerlines of the magnetic pole teeth 12 (72). Therefore, the angle P_s defined by the extensions of the two adjacent magnetic pole teeth equals the angle defined by lines connecting the centers of the tip end portions of these magnetic pole teeth with the center of the rotor X.

Applicant submits that in Kimura a second angle P_r (or P_t , which is a typo error) is found in Figures 2 and 8 to be defined by a line connecting the center of the tip end of a magnetic pole tooth with the center of the rotor and a line connecting the center of a rotor permanent magnet (22) adjacent to the magnetic pole tooth to the center of the rotor. However, this angle P_r is not the angle defined by lines connecting the centers of the tip end portions of the two adjacent magnetic pole teeth with the center of the rotor. In fact, P_r simply defines the rotor pole pitch, i.e. the angle between 2 rotor poles vis-à-vis the center of the rotor.

As the above discussion shows, Pijanowski and Kimura references alone or in combination do not teach or suggest the debated features of claimed 1. Thus, claim 1 is not rendered unpatentable under 35 USC 103(a) over Pijanowski in view of Kimura. Thus claim 1 is allowable, and claims 2 – 6, 8 and 9 which depend on claim 1 are also allowable. Applicant therefore respectfully requests that the rejections of claims 1 – 6, 8 and 9 under 35 U.S.C. § 103(a) be withdrawn.

Conclusion

Applicant submits that this application is now in condition for allowance, and favorable reconsideration of this application in view of the above remarks is respectfully requested. If, there are additional fees due, Applicant requests that this paper constitutes any necessary petition and authorizes the Commissioner

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Reply to Office Action of August 4, 2003

to charge any underpayment, or credit any overpayment, to Deposit Account
No. 23-1925.

If the examiner finds that there are any outstanding issues which may be
resolved by a telephone interview, the Examiner is invited to contact the
undersigned at the below listed number

Respectfully submitted,

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By 

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